Towards a Blended Strategy for Quality Distance Education Life-Long Learning Courses – The Patras Model
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Abstract: The utilization of Technology Enhanced Learning and more specifically of Distance Education for Life-Long Learning and Continuous Professional Development are at the epicenter/focus of European policies for the improvement of the delivery of Vocational Education and Training. In this context, one of the important challenges is the design of versatile quality assurance strategies for training; providers that can guide the development of eLearning programs that achieve real impact in the participants’ lives. The University of Patras has launched a project for the provision of short, accessible, certified distance life-long learning programmes. The main pillars of this project are Excellence, Specialized Personalized Training at cutting edge subjects, Quality, Deep Learning and Innovation. Quality is perceived as a vibrant, dynamic process that is evaluated in the eye of the beholder (learner). Deep Learning goes beyond (superficial) knowledge increase: it aims at the development of transformative knowledge, meaning and metacognitive skills. In this study we identify, propose and evaluate preconditions, criteria and strategies to achieve high quality blended learning online courses based on the relevant experience of the University of Patras’ Educational Centre for Life-Long Learning (KEDIVIM). We present the methods used to assess the quality of the eLearning programmes, key findings of the evaluation process as well as early results of a research study on the quality of learning. The formative evaluation process was conducted by external assessors based on Context, Input, Process, Product approach. The evaluation instruments were online questionnaires, structured and semi-structured observation. The research study on quality was conducted by using an online questionnaire and aims at estimating the level of participants satisfaction using interactive learning methods such as collaborative learning. Early results of the study suggest that the project lead to the rapid provision of eLearning programmes that used successfully active learning methods to achieve high learner satisfaction and address training needs and skills gaps.

Keywords: eLearning, Distance Education, Blended Learning, Technology Enhanced Learning, Life-Long Learning, Deep Learning

1. Introduction
The adoption of Technology Enhanced Learning has been widely recognized as a critical success factor for education in the digital era. European Union’s Digital Agenda strategy encouraged the mainstreaming of eLearning for all subjects in all levels of education in the national policies of all member states (European Commission, 2010; Hernández-Ros, 2012). Subsequently, the EU’s Digital Education Action Plan prioritizes the digital transformation of teaching and learning (European Commission, 2018). The constant development of new technologies and their applications influenced job market changes and trends and demonstrated the need for continuous professional development and upskilling. The latter is especially evidenced in the field of vocational education and training (European Commission, 2016a), where there has been created an emerging, dynamic field for Distance Life-Long Learning (LLL). According to a recent study, Distance Education is growing rapidly and was estimated to represent approximately 30% of the total education provision in Europe (Schneller and Holmberg, 2014). The European Centre for the Development of Vocational Training in its key policy priority “quality of VET delivery” links quality of learning directly to Technology-Enhanced Learning (CEDEFOP, 2016). In this context, LLL has been emphasized as a key policy objective in the Education & Training 2020 strategic framework (European Commission, 2016b).

Traditional and emerging training providers utilize distance education in order to offer life-long educational services to audiences far wider than those approached through traditional, classroom-based method. Further online learning is considered as critical for future long-term strategy by 70,8% US universities (OLC, 2014). This process open vast opportunities for the creation of flexible, agile and customizable educational programmes in a cost-effective way.
Training providers face the multi-faceted challenge to transition into a new and often unknown operation mode taking into account all aspects that influence learning quality such as the following: i) proper application of administrative procedures, ii) effective instructional and learning design, iii) sound use of media and materials, iv) the appropriate choice and utilization of technological applications and platforms, v) the certification of knowledge and skills, vi) the smart talent recruitment and onboarding, as well as vii) the optimal human resources management.

Several higher education institutions with aligning strategic approaches, experience, means and capabilities have undertaken the task to bridge higher education with LLL, continuous professional development, corporate training and vocational education and training by applying distance and blended learning methods. In the next sections we will present the relevant recent experience of the Educational Center for Life-Long Learning (KEDIVIM) in the University of Patras, in Patras, South-Central Greece.

2. Background: University of Patras Distance Life-Long Learning Strategy

The University of Patras has a long track record in the adoption of innovative action in education and learning partly due to its strong technological component but also to its progressive culture. In 1995 the University of Patras founded its own Centre for Vocational Education and Training (KEK). KEK operated in fields of excellence where the institute’s personnel had demonstrated rich experience, national and international presence through scientific, research and professional expertise. It implemented subsidized, national and European programmes, as well as self-financed actions and also open and free training courses. Following a new national higher education legislation, in 2018, KEK was transformed into the Educational Center for Life-Long Learning (KEDIVIM). Since 2014 KEK/KEDIVIM deployed the University of Patras’ strategy project for Long Learning for All”.

Analyzing the project’s philosophy, the label “smart” in the tag line on one hand refers to the flexible distance delivery of LLL and training courses open to the public, graduates, professionals, executives and employees. On the other hand it reflects a sophistication in the identification and expert choice(s) of the field(s) and subjects with high added value for the participants. The emphasis on certification reflects the focus on delivering high quality educational services that lead or are connected and correspond to the requirements of certification schemes determined by national or international bodies. Finally, the phrase “for all” expresses the conscious choice to facilitate the access and participation in the programs of as many as possible interested citizens, businesses and organizations, in multiple ways.

The two essential axes of the project are Excellence and Specialized, Personalized Life Long Learning and Training in cutting-edge subjects. These axes ensure that participants will be empowered to develop their knowledge and skills, enhance their professional profile and acquire competitive advantages in the job market.

For the sustainable attainment of the two above goals, three pillars have been selected as foundations for the design of University of Patras’ eLearning courses: Quality, Deep Learning and Innovation. These three concepts need further explanation in the realm of distance education.

3. Rationale: Quality, Deep Learning, Innovation in Blended Learning and Distance Education

Quality is a rather ‘elusive’ concept with multiple dimensions and varying definitions depending on time, geographical location and contextual factors such as economy, policy and culture (Harvey, 2009). While there is no single, unanimous definition of quality, in the context of this paper we accept the definition of quality as the degree to which a sum of endogenous characteristics satisfies set requirements (International Organization for Standardization, 2015) by the quality stakeholders (Berki, Georgiadou and Holcombe, 2004). In education, specifically, quality is associated with effectiveness, efficiency, equality, relativity and sustainability (Barrett et al., 2006) and the way these influence learners, instructors and other stakeholders.

Deep Learning or deep processing in education encompasses the achievement of transformational knowledge, meaning and metacognitive skills (Marton and Säljö, 1976). Deep learning is positioned in the opposite spectrum of surface learning (or surface processing) as a quantitative increase of knowledge (Marton and Säljö, 1997). It is directly linked to manifold thinking and, in particular, creative, critical and reflective thinking (Valtanen et al., 2008). The achievement of deep learning is an even more challenging factor considering that the learner is the key stakeholder in distance education settings and where the learners isolation is an inherently inhibiting factor (Tyler-Smith, 2006).

Innovation is a dynamic priority for constant (both gradual and disruptive) change signals in distance education that focus on the identification, experimentation, evaluation and adoption of novel methods, environments and tools for learning, which improve quality and facilitate deep learning in the quest for excellence and personalized LLL.
According to various research studies’ findings and reviews, distance education when designed, planned and implemented with an appropriate blend of pedagogical approaches, methods and technological means is equally effective and in some specific cases more effective than classroom-based instruction (Means et al., 2010; Siemens, Gasevic and Dawson, 2015).

Therefore, for the achievement of the aforementioned three pillars, the University of Patras’ eLearning courses are delivered using the blended learning model. Thus, the courses combine two or more of the following modes of learning: i) classroom instruction, ii) asynchronous eLearning (flexible self- and group study, production of individual and team assignments and projects), iii) synchronous eLearning (live meeting(s) with instructors and co-participants in a virtual environment); iv) social learning (informal, emergent learning). See e.g. Valtanen et al., 2013; Mystakidis, Berki and Valtanen, 2017; Mystakidis and Berki, 2018.

4. Blended Strategy for Quality Distance Education – The University of Patras Model

Reviewing quality assurance in education, we can identify approaches that focus on different aspects of quality. Some strategies focus on the system’s internal structure considering internal stakeholders such as learners and instructors and examine whether specific measurements are consistently met. Other approaches assess the effect(s) of the system in question towards exterior recipients (e.g. customers, external stakeholders) and their satisfaction. Finally, alternative strategies correlate quality with the achievement or specific threshold or standards of excellence (Van Damme, 2000).

In KEDIVIM along with its strategic focus on excellence, quality is perceived as a live, vibrant process that is estimated in the eye of the beholder (learner), and not as a static object. For the purposes of quality assurance in educational or/and administrative processes we take into account the inputs, the outputs as well as the involved actors’ feedback. Especially in the eLearning courses, quality assurance guidelines and policies are shaped, informed and updated by international schemes, models, quality labels, and good field practices.

International eLearning Quality initiatives such as ECBCheck, EFQUEL, E-xcellence and Epprobate offer the opportunity to eLearning providers to assess internally or audit externally all aspects of eLearning courses’ provision and courseware (Vlachopoulos, 2016) such as a) Information about and organization of the program, b) Target Audience Orientation, c) Course Design and Methodology, d) Learners’ Motivation, e) Collaborative Learning, f) Assignments & Learning Progress, g) Assessment & Tests, h) Quality of Content, i) Media Design, j) Technology, k) Evaluation & Review.

The University of Patras’ KEDIVIM blended strategy for quality eLearning programmes is realized through the fostering of a mixed culture of quality attributes, self-evaluation and innovation components in the following ways: i) Active commitment to quality and excellence empowerment on and for all levels (executive/top, managerial/middle, operational/low), processes and personnel; ii) the establishment of flexible/agile frameworks with clear procedures for all the life-cycle stages of the programmes; iii) resolutions to seek and willingness to accept feedback for improvement from various internal and external actors/stakeholders; iv) identification and dissemination of good practices, internally and externally.

More specifically, the University of Patras’ blended quality LLL programmes model inspired by Morrison, Ross and Kemp, 2006 includes the following processes in five stages:

**Stage I – Analysis & Initiation:** Interested university faculty members or course leaders receive templates and guidelines to prepare the application of new LLL programmes in collaboration with KEDIVIM’s personnel. Each submitted application is examined and approved by KEDIVIM’s Council. One essential evaluation criterion is the programme’s sustainability and correspondence to existing or anticipated learning or certification needs. Also, apart from subject-matter expertise and experience, an essential course leader selection criterion is experience in distance education and certification in professional eLearning.

**Stage II – Design & Development:** In this phase, course leaders or instructors without experience in professional eLearning are expected to prepare themselves by experiencing and participating in an eLearning trainers’ crash-course. One outcome of the course is the elaborated design of their new LLL programme. In this process, one quality measure is safeguarding the selection, formulation and commitment to adequate and achievable learning outcomes with an effective mix of learning activities, usually in various, blended modes. Simultaneously starts the flexible development of the learning environment, activities and materials for the new study programme. This can be produced usually by the members of the course teaching team with the guidance of KEDIVIM’s professional staff or external collaborators.

**Stage III – Marketing:** At the same time, KEDIVIM prepares relative communication material and, upon completion of Stage II, starts the marketing campaign of the new eLearning program using a variety of media so as to reach the identified target audience. Here we highlight special considerations for sensitive population groups.
Stage IV – Implementation: After the minimum number of participants is reached, starts the implementation of each course iteration. Pilot iterations of courses are early encouraged. Special attention is given to the detailed onboarding of all registered course participants so as to ensure smooth participation without any technological or motivational barriers.

Stage V – Evaluation: Internal or/and external assessors evaluate the programs formatively and summatively based on the Context, Input, Process, Product (CIPP) model (Stufflebeam, Madaus and Kellaghan, 2006). Course leaders and KEDIVIM’s management receive the formative and summative evaluation results to intervene rapidly whenever necessary or improve aspects of subsequent course iterations respectively.

Following, we will provide more information on three important aspects of the described processes; (i) the elaborated training, coaching and mentoring framework for professors and trainers that are new to distance education, (ii) the evaluation of the eLearning courses, and (iii) participants’ onboarding.

(i) Instructors, tutors and trainers in the University of Patras’ eLearning courses are expected to exhibit advanced techno-pedagogical competences in distance teaching and learning according to the TPACK model (Koehler and Mishra, 2009). They are expected to identify the learners’ needs and involve them in the curriculum focus of each course instance (Brinthaupt and Fisher, 2011). One basic goal is to combine elements and active learning techniques from three generations in distance education (Anderson and Dron, 2011) to contribute to the formation of a virtual community of inquiry and practice (Wenger, 1998). Course leaders and instructors have the choices to (a) participate in an experiential 8-week crash-course on eLearning course design, development and teaching (Figure 1), (b) prepare learning activities, lesson plans and lead synchronous meetings with the direct collaborative involvement and presence of a coach, and (c) young trainers can seek support and informal guidance to improve learning from mentors, more experienced practitioners.

(ii) An integral part of the quality assurance process is the systematic inquiry of the effectiveness of the course, the evaluation of distance LLL courses (Rossi, Lipsey and Freeman, 2004). For the evaluation we used the general quality indicators categories proposed early by the European Union, that are: relevance, synergy, compatibility, effectiveness, efficiency, sustainability, impact, flexibility (European Commission, 1999). According to the CIPP model, we evaluate three axes, the supportive framework of the course (infrastructure, content, support, coordination), trainers (teaching performance), and course implementation (learning methods, results). The evaluation takes place during and after the end of each course.

(iii) The participants’ onboarding process includes all the necessary steps to help the learners’ confidence and fluency with all the learning tools, platforms and methods; first they receive detailed instructions in text and video; second they are invited prior to the start of the program to attend to at least two test meetings, where they have the opportunity to use all the available tools and prepare for all upcoming activities. In case of technical problems in that stage or during the course, they can contact technical support personnel via email, voip systems or telephone.

5. Research Questions and Methodology: Evaluation and Assessment Procedures

In order to assess the performance of the measurements of excellence in KEDIVIM’s eLearning course design and delivery, we conducted a mixed research study. The study aimed to answer the following research question: How were the participants’ perceptions and experiences in the University of Patras Distance LLL programmes while using a blended quality strategy for teaching and learning?
The research was conducted in two stages. In the first stage, we combined data from the formative and summative evaluation of the University of Patras’ LLL courses that KEDIVIM delivered from January to December 2017. Data collection instruments for each course evaluation were (i) anonymous online questionnaires that participants completed voluntarily; the formative in the middle of the course, and the summative after its implementation, (ii) structured and semi-structured observation for virtual, synchronous and face-to-face meetings. The formative and summative evaluation questionnaires consisted of closed and open-type questions, 82 and 41 items in total, respectively. They featured 39 and 27 quality indicators respectively (66 in total) on all aspects of the course’s design and delivery. The quality indicators were formulated either as an overall course component (e.g. assignment feedback) or as an individual trait (e.g. motivation provided by a specific trainer) to be rated in a scale from 1 to 5 (none, low, moderate, very good, excellent). The formative questionnaire included a section on participants’ demographic data. The data was analyzed both quantitatively and qualitatively. Closed questions were analyzed statistically while open-ended questions were further processed utilising content analysis’ techniques (Cohen, Manion and Morrison, 2007).

We collected and combined data from 17 evaluated trainers’ training courses in the field of Educational Sciences with 318 total participants. These courses were delivered by 16 members of the training personnel in various roles and with distinct or shared responsibilities. Seven of them had no previous experience as trainers in distance education. Each course featured at least 5 trainers and had a duration of 8 to 16 weeks. All courses were delivered using blended learning and had overall a completion rate of 84.91%. In particular, we analyzed 182 responses from the formative and 158 responses from the summative assessment questionnaire, respectively. The majority of the participants in this study were female (69%). As far as age is concerned, the two main categories were 25-34 years (56%) and 35-44 (23%). Concerning their level of education, almost all held a higher education degree (97%) while 37% had an additional postgraduate degree. The participants had various backgrounds, the strongest representation being Economy & Management (22%), Humanities (21%) and Natural Sciences (15%). The majority are at the beginning of their professional life, with zero (13%) or less than ten years of professional experience (55%). In this context, 67% currently work while 33% are at the job search. Their main motivation is the improvement of their place in the job market (starting a job, CV improvement, extra income, promotion).

At the second stage, in collaboration with Hellenic Open University, we participated in an ongoing study on eLearning courses’ participants’ views on peer communication and collaborative learning for learning quality (Batsila, 2018). The study postulates that peer communication among learners and active learning methods such as social, collaborative learning are factors that can have a positive effect of the quality of distance LLL programs (Ossiannilsson et al., 2015). The study used an anonymous online questionnaire consisting of three sections; (a) demographics, (b) general views on communication and collaborative learning, (c) inhibiting factors for collaborative learning. It had a total of 36 closed type questions using mainly a five-point Likert scale on the degree of agreement. The study took place between January and April 2018. KEDIVIM’s participants from the above past courses were invited by email to participate in the survey in April 2018, i.e. 4 to 12 months after the end of the courses. 66 out of KEDIVIM’s 318 contacted participants completed anonymously and voluntarily the online questionnaire. The survey received 157 responses in total. Early data analysis led to relevant findings supplementing the first stage. All questionnaires and responses in both phases were written in Greek language. The translation into English was carried out by one of the authors.

6. Research Results
6.1 Formative and Summative Evaluation Results
6.1.1. Statistical Analysis

Key findings on participants’ satisfaction on quality from the evaluation process were the following:
(i) all 17 LLL courses met the overall participants’ expectations (cumulative Mean=4.63; SD=.656)
(ii) 34 of 35 quality indicators concerning overall aspects of the course (Table 1) received very favorable ratings with average ratings ranging from 4.27 to 4.65. Aspects with the highest satisfaction rates were live meetings, technical support, content, assignment usefulness, organization.

Table 1: Main quality indicators concerning overall aspects of all courses

<table>
<thead>
<tr>
<th>Quality indicators</th>
<th>Mean</th>
<th>St. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>KEDIVIM’s Organization</td>
<td>4.39</td>
<td>.655</td>
</tr>
<tr>
<td>Learning Material</td>
<td>4.46</td>
<td>.682</td>
</tr>
<tr>
<td>Synchronous Learning</td>
<td>4.47</td>
<td>.677</td>
</tr>
<tr>
<td>Asynchronous Learning</td>
<td>4.31</td>
<td>.760</td>
</tr>
<tr>
<td>Assignments Feedback</td>
<td>4.29</td>
<td>.857</td>
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</table>
(iii) The overall quality indicator that received the lowest rating was Time Allocation (Mean=3.65; SD=.945). The qualitative analysis of open questions revealed details in depth.

(iv) All 31 individual indicators concerning the trainers’ performance (Table 2) revealed very high quality with means ranging from 4.48 to 4.91.

Table 2: Main Quality indicators concerning individual aspects of teaching performance in all courses

<table>
<thead>
<tr>
<th>Quality indicators</th>
<th>Mean</th>
<th>St. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Synchronous Learning Trainer (SLT) Knowledge</td>
<td>4.83</td>
<td>.404</td>
</tr>
<tr>
<td>SLT Active Teaching</td>
<td>4.79</td>
<td>.517</td>
</tr>
<tr>
<td>SLT Trust</td>
<td>4.76</td>
<td>.539</td>
</tr>
<tr>
<td>SLT Motivation</td>
<td>4.66</td>
<td>.614</td>
</tr>
<tr>
<td>Asynchronous Learning Trainer (ASLT) Knowledge</td>
<td>4.74</td>
<td>.499</td>
</tr>
<tr>
<td>ASLT Active Teaching</td>
<td>4.60</td>
<td>.677</td>
</tr>
<tr>
<td>ASLT Trust</td>
<td>4.57</td>
<td>.674</td>
</tr>
<tr>
<td>ASLT Motivation</td>
<td>4.48</td>
<td>.732</td>
</tr>
</tbody>
</table>

6.1.2. Qualitative Analysis

(v) Analyzing the responses to the open-ended items in the questionnaires, participants expressed their satisfaction for their learning progress and achievements as it was recorded in the ratings. Participants with experiences from similar courses praised both orally to the trainers and in their written comments the superiority of KEDIVIM’s courses.

“I have no improvement suggestion. The program was very good and in comparison to courses from other universities e.g. (name), University of Patras’ program is far superior in all aspects and especially in regards to microteaching”.

(vi) The biggest challenge that was reported by participants in certain programmes was the lack of time to participate in various aspects such as attendance to all synchronous meetings, study of the theoretical materials and completion of mandatory assignments, in alignment with the survey finding (iii). Thus they suggested longer course durations. This was an anticipated issue in LLL of adults who work and have additional roles and obligations. As this issue was detected very early, we countered it with increased flexibility and personalization in course deadlines as well as positive reinforcement in the communication.

“Concerning time, I would prefer the course to have a bigger duration.”

“The time allocation should be better. Time spans among virtual meetings and assignment deadlines could be longer so as to allow for better study of all units”.

(vii) Another interesting finding was the total lack of mentions of technical problems and frustrations, a frequent phenomenon in eLearning courses. This is consistent with the very high satisfaction rate with the technical support (AV=4.63; SD=.656). This fact exposes the successful selection of suitable technologic platforms, their smooth operation and above all, the effectiveness of the onboarding learning process.

6.2 Learning Quality Study Results

(viii) The early analysis of the provisional data suggested that the delivery of the University of Patras’ eLearning programmes used successfully peer and active learning methods to achieve high learning quality, learner satisfaction, confidence and optimism. First, despite the considerable long period since course completion and the rudimentary communication effort, the response rate (20.75%) reached levels significantly higher than the empirically reported averages in distance education programs’ surveys in Greece, which are around 5% (Batsila, 2018). This could be interpreted as an indicator of appreciation and trust; they did not just complete a course and ran away. This observation is consistent with responses to question item 40 of the summative questionnaire; 78% would be interested in participating in future eLearning courses provided by the University of Patras.

(ix) Moreover, 83.3% of KEDIVIM’s respondents in the study confirmed that the communication among the participants was encouraged and facilitated. Further, 66.7% reported that collaborative learning took place during their course. In contrast, only 55% and 41.7% respondents from other Greek institutes and training providers reported the existence of peer communication and collaborative learning respectively.

(x) This experience led to another interesting finding in parts B and C of the survey. The University of Patras courses’ participants responded significantly higher (stronger degree of agreement) to all six “positive”, “optimistic” statements in part B on the value, feasibility and importance of the aforementioned two factors for the quality of learning. Reversely, in part C, they responded consistently lower (weaker degree of agreement) to...
21 out of 24 “negative” statements about problems and troublesome conditions that can hinder collaborative learning.

7. Conclusions and Summary
Evaluation and data analysis from completed eLearning courses revealed that the University of Patras’ blended quality strategy had an overall positive effect. All aspects of learning quality regarding design, development, content, personnel, media, platforms, organization, implementation and communication were confirmed. Teachers in both synchronous and asynchronous settings performed at a very high level in accordance to respective environments’ affordances. Participants expressed high satisfaction in KEDIVIM’s distance life-long learning programmes that met their expectations.

The early findings from the research study on learning quality support the claim that the perceived quality in the eyes of University of Patras’ distance LLL program participants was high, possibly higher than those experienced from other institutes. This can be attributed also to the successful use of peer and active learning methods. The courses’ participants (and survey’s respondents) also appeared to be more confident and optimistic both by recognizing factors for learning quality improvement (process improvement, in particular) and not being intimidated by potential obstacles in peer collaboration.

8. Limitations and Future Research Considerations
The empirical evidence of the current study needs to be extended in order to obtain a thorough picture of the Patras model. Thus, survey results are needed also from more courses with (perhaps) different durations from all disciplines in order to validate the sustainability of the quality strategy, possibly also among participants from different ethnicity and culture. Also, concerning the study’s research design, other instruments such as focus groups or unstructured interview could possibly reveal different data and information. Finally, we consider extending the current study in the direction of assessing the impact of the current, blended quality strategy on teaching performance, learning quality and participants’ satisfaction in the University of Patras distance LLL programmes.

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